AD-A282 757

ADST
Cold Start Procedures Manual
for the
MCC / Mips Host
Configuration 1.0.0

Loral Western Development Labs

Electronic Defense Systems Software Department

Software Engineering Laboratory

3200 Zanker Road

P.O. Box 49041
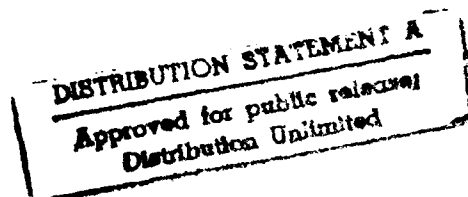San Jose, California 95161-9041

3 September 1993

Contract No. N61339-91-D-0001
CDRL A00B

94-24963

Prepared for:

Simulation Training and Instrumentation Command
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 328266-3275

LORAL

94 8 08 042

ADST
Cold Start Procedures Manual
for the
MCC / Mips Host
Configuration 1.0.0

Loral Western Development Labs

Electronic Defense Systems Software Department

Software Engineering Laboratory

3200 Zanker Road

P.O. Box 49041
San Jose, California 95161-9041

3 September 1993

Contract No. N61339-91-D-0001
CDRL A00B

Prepared for:

Simulation Training and Instrumentation Command
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 328266-3275

LORAL

REPORT DOCUMENTATION PAGE

Form approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 9/3/93	3. REPORT TYPE AND DATES COVERED Cold Start Procedures

4. TITLE AND SUBTITLE
ADST, Cold Start Procedures for the BDS-D MCC/Mips Host Configuration

5. FUNDING NUMBERS
C N61339-91-D-0001
CDRL A00B

6. AUTHOR(S)
Compiled by: Au-Yeung, Anna; Mohning, Brad; Peterson, Pete

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
Loral Western Development Labs
Electronic Defense Systems Software Department
3200 Zanker Road
San Jose, California 95161-9041

8. PERFORMING ORGANIZATION REPORT NUMBER

ADST/WDL/TR--93-003038

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Simulator Training and Instrumentation Command (STRICOM)
Naval Training Systems Center
12350 Research Parkway
Orlando, FL 32826-3275

10. SPONSORING ORGANIZATION REPORT

ADST/WDL/TR--93-003038

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

Approved for public release; distribution is unlimited.

12b. DISTRIBUTION CODE

A

13. ABSTRACT (Maximum 200 words)

These cold start procedures outline the start up and shut down procedures for the initial software release of the BDS-D MCC/Mips Host Configuration.

14. SUBJECT TERMS

15. NUMBER OF PAGES
23

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	17. SECURITY CLASSIFICATION OF THIS PAGE	17. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT UL
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)
Prescribed by ANSI Std Z39-18
298-102

TABLE OF CONTENTS

LIST OF TABLES

1.0   Scope

Per DI-MISC-80711, this manual details the Management Command & Control (MCC) Cold Start Procedures for the AIRNET configuration on the Mips host. Distribution instructions, interaction with other simulators, and hardware compatibility notes (as applicable), build instructions as well as a detailed overview of the software release are included in the ADST Version Description Document for the MCC / Mips Host 1.0.0; document number ADST/WDL/TR--92-003037.

"I Pete Peterson on this date 9/3/93, hereby certify that the software release BDS-D MCC / Mips Host 1.0.0 has been built from limited access, controlled baseline. This software is, to the best of my knowledge, free of malicious code intended to subvert its operation."

2.0   Cold Start Methodology

The Cold Start procedure for the MCC describes the user's ability to regenerate a Mips operating system and load the MCC application software. This procedure consists of installing and bringing on-line the operating system, application, source files, data files, boot files, configuration files and databases. Verification of a build load is demonstrated through a series of checklists. This procedure also provides a detailed list of instructions that allow the user to startup and shutdown the MCC.

2.1 Required Resources

The following sections outline the required hardware and software resources needed to install and bring on-line the Mips based MCC.

2.1.1 Hardware Resources

The Mips based MCC requires the following hardware configuration resources to run:

Computer:	Mips Magnum 3000/33
Memory:	64MB
Hard Drive:	300MB minimum
Interface:	Ethernet card

Computer:	Mac Plus
Memory:	2.5MB

2.1.2 Software Resources
The following software is required to run the baseline for the Airnet MCC software:

MacPlus:
    OS Release 6.0.3
MIPS:
    OS RISCos4.5.1
    CAP 6.0 KIP (Kinetics IP AppleTalk daemon)
    SIMNET device driver
SHIVA:
    Shiva FastPath version 4 or higher.

The magnetic media (disks and tapes) prepared and supplied as part of the MCC 1.0.0 are identified below:

MIPS:

Media Type	Label	Description
DC 6150 Tape	AIRNET MCC application	MCC / Mips Host 2.0.0 application tape
DC 6150 Tape	AIRNET MCC Source	MCC / Mips Host 2.0.0 source tape
DC 6150 Tape	SIMNET device driver	

Include the following in your path on the MIPS:

Path names: /usr/X11/bin: /usr/lbin: /usr/ucb: /usr/bin: /bin:
             /etc: /usr/new: /usr/local/bin: /bsd43/bin: /saf/bin

MacPlus:

Media Type	Label	Description
3 1/2" floppy	SIMNET SCC 1.0.0 executable	SCC Version 1.0.0

2.1.3 Other Required Resources

There are no other required resources.

2.2 Cold Start Procedures

The following section outlines the procedure for performing a cold-start on the Mips 3000/33 system.

2.2.1 System Preparation

These section demonstrates how to install the operating system, the RISCwindows Release 4.0.0, the SIMNET device driver, and the CAP on the Mips 3000/33. (Warning!!! - This section should only be performed by trained system personnel, due to hardware differences between systems.)

SYSTEM PREPARATION

CONTROL ACTION	EXPECTED RESULTS
RISC/OS Version 4.5.1 Installation	By default, machine displays MIPS Monitor version, memory size, Icache size, and Dcache size, and a command prompt ">>".
1. >> boot -f tqsd(0,6,2)sash.std	This command is machine dependent. See the MIPS "Software Binary Release Notes"; "Installation Notes section" on "Installing RISC/os 4.51 from scratch" for detail. Display completion messages such as: "Rewinding the tape .... Done entry: hex number" A standalone shell displays on screen with a "sash" prompt.

2. sash: **cp -b 16k tqsd(0,6,4) dksd(,,1)**	**This command is machine dependent.** See the <u>MIPS "Software Binary Release Notes</u>"; "installation Notes section" on "Installing RISC/os 4.51 from scratch" for detail. Display completion messages such as: "Rewinding the tape .... Done." A "sash" prompt returns.
3. sash: **boot -f tqsd(0,6,11)unix.r3030_std root=sdc0d0s1**	**This command is machine dependent.** See the <u>MIPS "Software Binary Release Notes</u>"; "installation Notes section" on "Installing RISC/os 4.51 from scratch" for detail. Display forward spacing message, revision information on CPU, FPU and OS, memory size, and status of the miniroot device files. Returns a "#" prompt.
4, Enter the followings to install OS: **# set -a** **# From=Q120** **# inst**	Displays " Software package installation" message, machine type, and root disk type.
5. Is the information above correct? (y n) [y] ? Enter: **y**	Displays "The process will take a few minutes" message.
6. Would you like to install the kernel to the miniroot (y n) [n] ? Enter: **n**	Enter "n" because the kernel will not fit on the miniroot.

7. Display a list of sub-packages and returns with the following question.
 	
Install ALL subpackages (y n) [n]?
Enter: **n**
	User will be asked to select the optional subpackages to be installed. Enter "y" to the following subpackages:
	  root
	  m2000-33adc - machine dependent
	  m2000-33sdc_dev - machine dependent
	  usr
	  cmplrs
	  cmplrs-bsd43
	  man
	  compat
	  bsd43
	  reconfig
	  emacs
	  sccs
	  news_readers
	  games
	  mh

8. Display current value of the clock and returns with the following question: Is the clock correct (y n) [n]? Enter: **y** if correct or **n** if incorrect.	Displays the next-step message "verifying single-user mode".

9. Do you want to install sash to the volume header (y n) [y]? Enter: y	Answer "y" unless you really understand the consequences. Displays "installing sash to the volume header" message and returns an usr partition question.
10. A list of possible partitions displays on screen, user has to select one of the partition number. Displays a status message " /usr partition will be installed on partition # ". Which partition should /usr be installed on? Enter an appropriate **partition number**.	Displays the next-step message "initializing file systems".
11. To override initialization of each individual file system below: Initialize filesystem (y n) [y] ? Enter: **y** Disk type for controller 0 drive 0 [94191]? Enter: **LXT-200s** - machine dependent Initialize filesystem on /dev/root (y n) [y]? Enter: **y** Initialize filesystem on /dev/usr (y n) [y]? Enter: **y**	Displays filesytem initialization status and warnings. Displays filesystem check status and warnings.
12. Displays filesystem mounting status and prompts the following question. Do you wish to change swap partition configuration (y n) [n]? Enter: **n**	Displays the next-step message "verifying disk space".
13. Do you want to check for space (y n) [y] ? Enter: **y**	Enter "y" unless you really understand the consequence. Displays status message, extracts files from subpackage archives (user need to follow instruction on screen), makes device special files and run comply. Status message is displayed for each of these processes.

14. Do you wish to configure the network (y n) [n]? Enter: **y** Set hostname [no_hostname]? Enter: **mips** Set netmask [0xffff0000]? Enter: **0xffffff00** Set broadcast address [255.255.255.0] ? Enter: **130.62.9.255** Set net address [127.1.0.0] ? Enter: **130.62.9.50** Should we create the /etc/local_hostname file (y n) [y] ? Enter: **y** Should we add the above entry to the /etc/hosts file (y n) [y] ? Enter: **y** Set domain name [mips.com]? Enter: **mips_1** Should we create the /etc/local_domainname file (y n) [y]? Enter: **y**	**All answers here are machine dependent and site specific. See your system administrator for proper entries.** The next-step is "cleaning up" then a "installation complete" message is displayed. To check the RISC/os release version, Enter: # uname -r

RISCwindows 4.00 Release Installation **This is an overview of the RISCwindows 4.00 Release Installation. For more details refer to MIPS "Software Binary Release Notes, RISCwindows 4.00 Release - document no. 75-00162(A)"**	* Installer must be superuser * System should be put into single-user state by entering: # telinit 1 <u>Install on another fileystem other than root (/usr):</u> # mount /usr then proceed with the installation process. The installation will be performed twice. The first pass is for the rest of the subpackages relative to /usr# while the second pass for the RISCwindow_links subpackage relative to root. After the second pass on installation process, create a link form /usr# to /usr. # ln -s /usr#/usr/RISCwindow4.0 /usr/RISCwindows4.0
1. Install the package. Mount the RISCwindows binary package 1/4" cartridge tape (in QIC-120 format) and enter the following commands: # mount /usr # /usr/pkg/bin/inst Install package relative to where [/]? - Press the <RETURN> key Is the information above correct? (y n) [y]? - Press the <RETURN> key	# is the prompt sign. Display installation status.

2. Select optional subpackages.
 	
Install ALL subpackages (y n) [n]?
Enter: n
 	
Select the following optional subpackages:
  RISCwindows_binaries
  RISCwindows_links
  RISCwindows_server
  RISCwidnows_libraries
  RISCwindows_misc_fonts
  RISCwindows_oldX11_fonts
  RISCwindows_fonts100dpi
  RISCwindows_fonts75dpi
  RISCwindows_manpages
  RISCwindows_psview
  RISCwindows_contrib_bin
  RISCwindows_contrib_src
	Prompts user to select optional subpackages if user answers "no" to the "install ALL subpackages" question.

3. Set system clock/calendar Is the clock correct (y n) [y]? - Press the <RETURN> key	Display current clock value.

4. Verify single-user mode.	Display the verification status.
5. Preserve local files.	Display the preserving local files status.
6. Verify disk space. Do you want to check for space (y n) [y]? - Press the **<RETURN>** key.	System checks to verify that there is enough disk space to install the package. Display verification status.
7. Strip old links to the optional subpackages.	Display stripping status
8. Extract files from subpackage archives.	Load the selected optional subpackages. Display loading status.
9. Run comply.	Display run comply status.
10. Clean up the old versions.	Clean all files from previous version.
11. Restore preserved user files.	Display restoring status.
12. Clean up. Remove install tools (y n) [n]? Enter: y Set system to multi-user mode, type: **# telinit 2**	Installation is complete at this point.
13. Post installation check. **# ls /usr/ncd** If the above directory exist, create a link to it. **# ln -s /usr/ncd /usr/lib/X11/ncd**	Must in multi-user mode.

SIMNET device driver Installation.	

1. Directory and file setup
 	
`# cd /`
`# tar xvf /dev/ctape0`
 	
`# cd /usr/src/uts/mips/bsd/mips`
`# mkdir enp`
`# cd enp`
 	
Copy device driver files
`# cp /usr3/rucker/simnet/src/magnum_enpdriver/* .`
 	
Rename files
`# mv if_lacomm.c, enp.4_51 ../if_lacomm.c`
`# mv if_lance.c.enp.4_51 ../if_lance.c`
`# cd ..`
	Must be in multi-user mode.

2. Invoke make and create enpa.o
 	
Invoke makefile
Must add "/usr/include" to makefile
`# make`
 	
Make the enpa.o file
`# cd ../../io`
`# cp ../bsd/mips/enp/enpa.c .`
Edit the makefile to add "-I ../bsd/mips/enp" to the BSD_FLAGS
`# make enpa.o`
`# mv enpa.o ../bootarea_i`	

3. Make interface
 	
Edit interface files
`# cd ../master.d`
`# cp kernel.r3030_std kernel.r3030_cmc`
`# cp sysgen.r3030_std sysgen.r3030_cmc`
Add "increase MAXUMEM 32768" to kernel.r3030_cmc.
Add "VECTOR: module=enpa"
    "INCLUDE: enpa" to sysgen.r3030_cmc.
`# cp ../bsd/mips/enp/enpa .`
`# cd ..`
 	
Edit makefile to add unix.r3030_cmc to EXTRA_UNICES_1
`# make unix.r3030_cmc`
`# mv unix.r3030_cmc /`	

4. Make enp make enp device **# cd /dev/DEV_DB** # cp /usr/src/uts/mips/bsd/mips/enp/common.local . **# cd ..** **# ./MKDEV enp** **# cd /** if unix_r3030_std doesn't exist, save the original kernal. **# mv unix unix_r3030_std** else **# rm unix**	
5. Create link **# ln unix.r3030_cmc unix**	
6. Reboot the machine. **# telinit 6**	Reboot the system to multi-user state. Installation is complete.

2.2.2 Application Preparation

2.2.2.2 Installation of Release

This section describes the installation of the MCC / Mips Host 1.0.0 release tape on to the Mips 3000/33 computer system. A list of executable files, data files, configuration files, startup and shutdown files and their respective location in the directory tree is shown in Table 2-1. Table 2-1 allows the user to verify that what was copied off the MCC / Mips Host 1.0.0 release tape on to the target machine to run in an operational environment is a complete list of application files and their location in the directory tree.

INSTALLATION

CONTROL ACTION	EXPECTED RESULTS
Installing on the MIPS	
1. Log into the MIPs as "**root**"	See your system admin. for root password
2. Load the executable and data files: Insert the tape "AIRNET MCC" into the tape reader Enter the following on the MIPs: # **mkdir <dest>** # **cd <dest>** # **tar -xvhf /dev/rmt/ctape0** 　　　　　- extract all files from tape and 　　　　　　created a "saf" directory. # **cd /**　　　　　- go back to root to... # **ln -s <dest>　saf** 　　　　　- create a symbolic link to 　　　　　　*saf!!!!!!* which is needed to 　　　　　　run "phantom" later. # **cd /saf** # **ln -s <terrain_path> terrain**	[errors of type "can't find xxxx.h" indicate that your paths are not configured correctly.] - go to destination directory - make a link in <dest.> to point to your terrain database.

Table 2-1 Application Files and Location in Directory Tree

DIRECTORY	APPLICATION FILES
MCC_2.0.0	README phantom
terrain	* - data files
bin	assoc.def - supplied as a **template** only. /etc/atalkatab not supplied-"**site specific**". enp.bin katosoft.p ktdev.def netcon netdump netstart network.def - **site specific** netxr ringstart tblgr tblgr.lisp ttysetup xreset actread

config	#README#
	Makefile
	README
	Saf-resources
	TbLgr-resources
	activate.mac
	blue_cis.lisp
	blue_cis_echelons.lisp
	blue_echelons.lisp
	blue_forms.lisp
	blue_mcc_config.lisp
	bombs.lisp
	capacity.lisp
	color.mac
	config.lisp
	config.mac
	culture.lisp
	damage_map.lisp
	detection.lisp
	df_damg.lisp
	ech.mac
	filters.lisp
	fulcrum.lisp
	hitmodels.lisp
	icons.mac
	if_damg.lisp
	ivis.lisp
	machine.lisp

	make.apprules
	make.config
	make.depend
	make.driver
	make.include
	make.librules
	mappings.lisp
	mcc_blue_config.lisp
	mcc_blue_echelons.lisp
	mcc_blue_forms.lisp
	mcc_config.lisp
	mcc_echelons.lisp
	mcc_passwd.lisp
	mcc_red_config.lisp
	mcc_red_echelons.lisp
	mcc_red_forms.lisp
	minefield.lisp
	monoc.mac
	objtype.lisp
	overlays.lisp
	pictures.mac
	points.lisp
	project.lisp
	red_cis.lisp
	red_cis_echelons.lisp
	red_forms.lisp
	red_mcc_config.lisp
	rwa_config.lisp
	se_munition.lisp
	se_vehicles.lisp
	simactiv.lisp
	simhosts.lisp
	simmodels.lisp
	simnet6-0.mac
	detection.mac
	sims.lisp
	sims_sanjose.lisp
	utm.lisp
	vehtype.lisp
	vtypes.mac
	ws.lisp
	simnet.mac
	lisp.list
config.factory	machine.lisp

2.2.2.3 Shiva and MIPs Configuration

This sections includes the (MIPS and Shiva) / (MAC and Shiva)gateway configuration instructions.

SHIVA Gateway Configuration (on MAC)	Shiva gateway is the bridge between MIPs and Macintoshes. Configuring the Shiva is a "one time job".
Reference to the Shiva Manual or follow the example below.	All entries (Italic) are product and site dependent. Use this as an example only.
1. Pause the MAC that is use to configure Shiva.	
2. Setup the following menus: **Main Menu** **Gateway** Fastpath Serial Number: *1234567890* Prom Version: *4.1* Currently Downloaded File: K-STAR *Version 8.0.1* Current Configuration File: *WDL-MCC-192* Ethernet Address: *0080D3003B78* **LocalTalk Interface** AppleTalk Zone Name: *ADST-MCC* AppleTalk Net Number: *320* AppleTalk Node Number: *220* **EtherTalk Phase 2** Range Start: 0 Range End: *0* Etalk 2.0 Net Number *0* Etalk 2.0 Node Number *0* **Configurations** *K-STAR IP* *ATalk Phase II* **Switches** Auto Config: *Off* Remote Boot: *Off* **Option Flags** Off: *all*	

K-STAR IP	
IP Information IP Address of FastPath Box : *192.67.225.10* IP Subnetwork Mask: *255.255.255.0* IP Broadcast Address: *192.67.225.255* IP Address of Default Router: *0.0.0.0* **Administrator** IP Address of Administrator Host: *192.67.225.201* **IPTalk Interface** AppleTalk Zone Name: *LORAL* AppleTalk Network Number: *1* AppleTalk Node Number: *10* **Number of IP Clients** Dynamic: *0* Static: *0*	
3. Verify "atis" is running on MIPs	
4. Download K-Star *8.0.1*	
5. Type "Go" to download the above menus to Shiva.	Log file indicates K-Star atalkab configuration is complete.

MIPS Configuration	Configuring the MIPs is a "one time job" only. Once the MIPS is configured, you do not have to "configure the MIPs" every time you want to launch the Aimet MCC.
There are three daemons involve: **atalkad** - an apple talk administrator. **atis** - an apple talk interconnect system. **aufs** - a CAP application which acts as an apple unix file server for Macintosh computers with Appleshare client code.	CAP - Columbia .AppleTalk Package for Unix.
1. Copy "atalkad" and "atalkatab" from /saf/cap60 to /etc.	

2. Insert the following code at the end of the /etc/init.d/netdaemons file:
 	
if test -x /etc/atalkad; then
  /etc/atalkad; echo "atalkad\c"
fi
 	
if test -x /saf/cap60/atis; then
  /saf/cap60/atis; echo "atis\c"
fi
 	
if test -x /saf/cap60/aufs; then
  /saf/cap60/aufs -G guest -V /saf/cap60/AFPVOLS; echo "aufs\c"
fi
	Code must exist to init the deamons.

The following file instructions are site/host specific. They are served as examples.	

1. Assign IP address to logical names:
# cd /etc 	
edit the hosts file:
    127.1   local host
    192.67.225.201 MIPS-1
    192.67.225.10   ADST-MCC
	ADST-MCC identifies SHIVA and the Appletalk net.

2. Set hostname:
# cd /etc 	
edit the local_hostname file:
    MIPS-1
    netmask 0xffffff00 broadcast 192.67.225.0	

3. Create a guest entry for the MAC: # cd /etc edit the passwd file guest::1300:1:Guest Account:/usr/local/lib:/bin/csh	(1300 is an arbitrary user number)
4. Instruct MAC which volume to load: # cd /saf/cap60 edit the AFPVOLS file: /saf/config:MCC:	

5. Setup up assoc.def configuration file:
# cd /saf/bin 	
edit the assoc.def file:
    site 1
    host 11
	The site and host ids are site dependent. When editing this file, DO NOT put a carriage return after the host number. Make sure the host number is at the end of the file.

6. Set routing information for the static IPTalk:
# cd /etc 	
edit the atalk.local file:
 	
<u>appletalk net</u>   <u>node</u>   <u>zone</u>
    0.1   201   Loral
    0.1   10   192.67.225.10
	Use current MIPS's applenet zone name.

7. Verify the existence of /saf/bin/enp.bin: # ls -l /saf/bin/enp.bin	This is the board code for the Ethernet port.

8. Verify the /saf/config.factory/machine.lisp file:
 	
CHANTYPES {0}
UDP {1}
CAP {2}
(
  (PORTS CHANTYPES
    (port_type CAP 3))
    (ethernet_device "/dev/enp0")
)	

9. Define IP subnets to AppleTalk Mapping:
> cd /etc
edit the atalkatab file
  0.1   N1   192.67.225.0   LORAL
  1.64   K   192.67.225.10   ADST-MCC
 	
  192.67.225.255 L0
  L0 L0
  L0 L0 L0 L0   S0 S0
  LX0   S0 S0
  %N   %N
	- Describe an appletalk net ("anet")
	anet # : 0.1 - this MIPS is on applenet 1
	          1.64- on applenet 320 ((1*256)+64 =320)
	flags: N1 - anet equivalent to IP net
	        1 -bdcast addr 0.0.0.255 ANDed w/IP addr.
	        K - Anet is the atalk port on SHIVA
	        C - SHIVA is also a "core gateway"
	
	- Describe the SHIVA configuration
	# four byte IP address
	# ipdebug ipfile
	# ipother unused unused
	# flags ipstatic ipdynamic
	# atneta atnete

10. Reboot the machine. # telinit 6	Reboot the system to multi-user state. Installation is complete.
11. Test the appletalk and atis deamons: See if MIPS "sees" appletalk entities # atlook ;; should see gateway Check atis # atistest Check to see if appletalk zones are visible #getzones	Must be Root.

2.3 Warm Start and Shutdown Procedures

The following section outlines the procedure for performing a warm-start and shutdown of the Mips 3000/33 system and SCC.

2.3.1 Startup Procedures

This section describes in detail how to startup the Airnet MCC 7.2 on the MIPS.

STARTUP PROCEDURES

CONTROL ACTION	EXPECTED RESULTS
1. Log into the MIPS as root	See the system administrator for password.
2. Make sure atis, aufs, and atalkad are running: # ps -eaf	grep atis # ps -eaf	grep aufs # ps -eaf	grep atalkad User may use "ps -alx" to list all processes instead.	If they are not running, see the instruction on how to configure the MIPS for Airnet MCC above.
3. Verify the MIPS to Shiva gateway connection Verify Shiva is configured.	A MCC "devil" icon should appear if everything is OK. If Shiva is not configured, see the instruction on how to configure the Shiva gateway for Airnet MCC from above.
4. Start up the network and CIG communications: # netstart	* Phantom must not be running. "netstart" kills any running ringstart and then restarts it. User may get the "... can't write to /dev/enp0: Error 0" message when starting ringstart, ignore it.
5. Ensure ringstart is running: # ps -eaf	grep ringstart	Ringstart is a background task that creates and maintains the connection between the Ethernet card and the Phantom executable. It is started by the "netstart" script. [Note: the following also kills ringstart & restarts it: # /saf/bin/restart this kills ringstart, restarts it, restarts enp, loads enp.bin. This has nothing to do with the Shiva! "restart" is a script that sets up the simulation Ethernet for the MCC]

6. Launch "Phantom" # cd /saf/MCC_2.0.0 # dbx phantom At the (dbx) prompt enter: (dbx) run -p -c -t knox-0311	<dest> is the destination directory. dbx is the debugger - BBN suggests using it. Ignore this message: "main: Source not available". If everything is OK, "SIMNET site/host: 1/11" message should appear on console. If not, do another ringstart. If the above message is displayed, console terminal will display the following prompt: "PHANTOM @ MIPS-1 >". User may enter host operator command or enter: # ? , for switches information.

Startup SCC on Macintosh	
1. Locate the Macintosh that is connected to the Shiva.	Should label the Macintosh as "SCC".
2. Connect to the MIPS via Chooser. Under "Chooser" menu: Select Appleshare and the LORAL Appletalk Zone. Select "MIPS-1 Aufs" file server. Hit the "OK" button. Connect to file server as "Guest". Hit the "OK" button. Select the MCC server volume. Hit the "OK" button.	- User name must be "guest" and Appletalk must be active. A new menu pops up. A new menu pops up. If connection is valid, the MCC volume will appear on the desktop as an "Owl on a cable" icon; otherwise, no icon appears [check the cables, ensure the MIPS is configured correctly, and check the Shiva's configuration].
3. Launch the SCC. Insert the SCC floppy. Double click on the "SIMNET SCC 2.0.0" executable. Double click on "LORAL" zone in the zones table. Click on the MIPS-1 in the "hosts" table. Click on the "Connect" button to connect SCC to the MIPS.	The "Connect Screen" menu pops up. MIPS-1 should then come up as an entry in the "hosts" table. The SCC will take a couple of minutes to download configuration files from the MIPS. When the main "SCC" screen pops up, the process is complete.

2.3.2 Shutdown Procedure

The following written set of procedures describe in detail how to shutdown the MCC.

SHUTDOWN PROCEDURES

CONTROL ACTION	EXPECTED RESULTS
1. On console terminal, Quit the simulation (phantom) if running: **# q** Quit the debugger: **dbx: quit** confirmation prompt: Enter: **yes**	Simulation should exit. Console terminal will display system prompt.

2. At the prompt, enter:**shutdown**
  (or)
  enter: **sync**
      sync
      halt
	The message: syncing disks... will appear, then the prompt >>> will be displayed.

3. Turn the front panel key switch to the "0" position. .	The system will power off.

3.0 Release Validations

3.1 Cold Start Validation

The following written set of procedures instructs the user on how to validate the success of the cold-start.

Cold-start Validation Instructions:

The expected results detailed in the System Preparation and Release Installation Procedure sections are indicative of a successful cold-start.

3.2 Warm Start Validation

The following written set of procedures instructs the user on how to validate the load once it is operational.

Warm Start Validation Instructions:

The expected results detailed in the Startup Procedure section are indicative of a successful warm start. After completion of Startup Procedure step 6, the MCC may be activated.